

Appl. No. 10/064,681
Amendment dated October 30, 2003

Amendments to the Specification:

Amend paragraphs 21, 28 and 30 as follows.

B1 [0021] The external cooling air path of Figure 1 relies on a duct 29 adjacent the engine 10. Air bleeds from the high pressure compressor ~~45~~ 17, enters the duct 29, travels through the duct 29 and arrives at the vanes of the high pressure turbine 21. The present invention utilizes one or both of these cooling paths to cool a brush seal. The cooling arrangement of the present invention allows the engine 10 to operate at elevated temperatures. Figures 2 and 3 each display a possible brush seal arrangement.

B2 [0028] The body of the brush seal 51 can have a passageway 67 extending therethrough. The passageway can extend through any suitable part of the body of the brush seal 51. For the single stage brush seal shown in Figure 2, the passageway 67 preferably extends through the side plate 57. The passageway 67 has an inlet at the front face of the side plate 57 and an outlet at the rear face of the side plate 57 adjacent the brush pack 61. If the side plate 57 includes a windage cover 59 (such as seen in Figure 4 2), the passageway 67 could extend through the windage cover 59. The passageway 67 allows cooling air C to enter the gap 65 and to impinge upon the brush pack 61. The cooling air C helps reduce the heat build-up at the interface between the brush seal 51 and the second component 63 or reduce the high ambient temperature within the gap 65.

B3 [0030] The first component 53 helps the cooling air C arrive at the brush seal 51. The first component 53 has a passageway 69 therethrough. The passageway 69 is located so as to communicate with the passageway 67 of the brush seal 51. The cooling air, bled from another section of the engine 10 (such as the compressor 13, 15, 17), travels through the passageways 67, 69 and enters the gap 65. Using the arrangement shown in Figure 1, the external duct

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29 of the engine 10 could supply the cooling air C to the passageway 69. The external duct 29 bleeds air from the high pressure compressor-15 17. Other methods and sources of cooling air, however, could be used to supply the passageways 67, 69. Since the first component 53 surrounds the inlet of the passageway 67 and the passageway 69 communicates with the passageway 67, the inlet of the passageway 67 is not exposed to the gap 65 between the first and second components 53, 63 of the engine 10.
